



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,060	06/01/2001	Stanton M. Keeler	M-11585 US	2297

7590

03/24/2004

MacPherson Kwok Chen & Heid LLP  
1762 Technology Drive  
Suite 226  
San Jose, CA 95110

EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
----------	--------------

2133

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/872,060

Applicant(s)

KEELER, STANTON M.

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. The Applicant contends, "Applicant respectfully submits that claim 16 is allowable over the Nakatsuji reference (USP 6,332,206). Indeed, the only optical disk discussed in the Nakatsuji reference is a DVD-ROM, a well-known second-surface disk. See, e.g., Col. 23, line 29". The Examiner disagrees and asserts that in the Applicant's response to Election Requirements in Paper No. 14 (2/5/2004) the Applicant explicitly stated, "Should the claimed transparent layer in the group I claims (16-20) function to defocus dust particles as discussed with respect to 'second-surface' optical disks, Applicant would agree that such a disk is a 'completely different' device". That is the Applicant argues that with regard to the Applicant's invention, only disks with a layer that functions to defocus dust particles would be patently distinct and disks with transparent layers that do not function to defocus dust particles "function as first-surface optical disks". The Examiner asserts that the teaching reference Luecke teaches "Surface defects or contamination on the cover plate do not normally introduce errors because they are not in the focal plane of the objective lens in the optical head" (col. 1, lines 50-53, Luecke). Hence the disk taught in Luecke has a transparent layer that does not function to defocus dust particles hence, by the Applicant's own admissions, functions as a "first-surface optical disk" and is not patentably distinct from the optical disk of the Applicant's claim 16 just as the optical disc of claim 21, by the Applicant's own admission, is not functionally or patentably distinct from the optical disk of the Applicant's claim 16 (i.e.,

the disk in Luecke is substantially identical to the disk of claim 16). Furthermore, since optical disks with transparent layers that do not function to defocus dust particles are currently **in wide use** (col. 1, lines 44-48, Luecke), optical disks that patentably function as a "first-surface optical disk", by the Applicant's own admissions, are existence and in wide use. Nakatsuji, on the other hand, teaches error correction for **modern optical disks** (col. 2, lines 31-36, Nakatsuji), which includes the optical discs of Luecke, since the optical disks in Luecke are modern optical disks in wide use at the time of the Nakatsuji patent, hence Nakatsuji clearly suggests the use of the ECC in Nakatsuji for such disks as taught in Luecke.

The Applicant contends, "These conventional ECC blocks were optimized for the older, second-surface disks having the conventional CD-ROM /DVD size". Nakatsuji employs Reed-Solomon codes, which correct the maximum number of errors for a given amount of redundancy and are optimal with respect to redundancy, hence are optimal codes independent of the transmission media. That is, given a target error rate and data throughput, Reed-Solomon codes are optimal with respect to the amount of redundant information required to maintain the target error rate and data throughput.

The Applicant contends, " When used in miniaturized first-surface optical disks, dust particles could cause multiple burst errors in these conventional ECC blocks as shown in Figure 1". The Examiner asserts that there is no indication in the claims that any type of interleaving or data formatting is used to avoid burst errors; hence the Examiner

Art Unit: 2133

does not see how this argument applies to any of the limitations in claim 16.

The Applicant contends, "Not only were the chances of burst errors increased, the degree of redundancy to provide the necessary ECC was not enough given that dust particles were no longer defocused". The Examiner asserts that one of the fundamental concepts of Error Correction Codes is that increasing redundancy increases error correction capabilities. One of ordinary skill in the art at the time the invention was made would have known how to increase error correction capabilities given a target error rate.

The Applicant contends, "use of such an ECC block would be contraindicated in second-surface disks -- the claimed ECC block increases redundancy and thus reduces the available storage space". The Examiner disagrees and asserts that one of the fundamental concepts of Error Correction is that Error Correction codes increase error protection at the price data throughput and that one of ordinary skill in the art at the time the invention was made would know how to derive a correct error correction code for a noisy media based on desired error protection and data throughput and would know how to optimize on these two parameters, in other words, desired error protection and data throughput are required parameters for the selection of an error correction code and selection of an error correction code is an obvious engineering design choice based on these two parameters.

The Applicant contends, "what Applicant is claiming is a first-surface disk having an ECC block specialized for the particular circumstances encountered in a first-surface environment". The Examiner asserts that based on the Applicant's arguments the optical disk as claimed by the Applicant is an optical disk, which is more susceptible to errors. The Examiner asserts that it would be an obvious engineering design choice to optimize by increasing error correction capabilities based on a desired target error rate and data throughput since error rate and data throughput are the fundamental parameters by which error correction codes are selected.

The Examiner disagrees with the applicant and maintains all rejections of claims 16-24. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 16-24 are not patentably distinct or non-obvious over the prior art of record in view of the references, Nakatsuji, Fumio et al. (US 6332206 B1) and ECMA-279 (ECMA-279 standard for DVD-Recordable Disks, November 1998) as applied in the last office action, Paper No. 15. Therefore, the rejection is maintained.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2133

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsuji, Fumio et al. (US 6332206 B1, hereafter referred to as Nakatsuji).

See Paper No. 15 for detailed action of prior rejections.

3. Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsuji, Fumio et al. (US 6332206 B1, hereafter referred to as Nakatsuji) in view of ECMA-279 (ECMA-279 standard for DVD-Recordable Disks, November 1998).

See Paper No. 15 for detailed action of prior rejections.

### **Conclusion**

4. This is an RCE of applicant's earlier Application No. 09/872,060. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2133

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

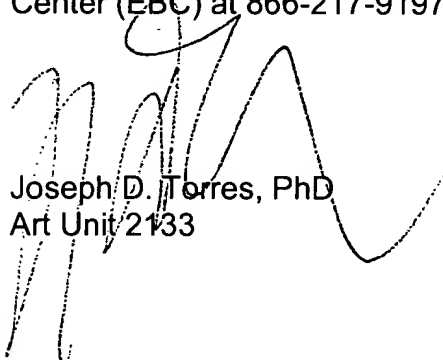
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (703) 308-7066. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 2133

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph D. Torres, PhD  
Art Unit 2133



AGENT D. TORRES  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100